UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _17 April 2009_.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1 - 32_ is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) _1 - 32_ is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
        1.☐ Certified copies of the priority documents have been received.
        2.☐ Certified copies of the priority documents have been received in Application No. _____.
        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _.
4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

1.   This office action is responsive to RCE filed on 4/17/2009. Claims 1 – 32 are

pending examination.

Response to Argument

The declaration filed on 7/7/2008 under 37 CFR 1.131 has been considered but

is ineffective to overcome the Osman et al U.S. Patent Application 2004/0024894

reference.

Applicant is attempting to show conception of invention prior to August 2, 2002,

the effective filing date of Osman et al 2004/0024894, coupled with *reasonable*

diligence as evidenced included in Exhibits A - I   and reduction to practice as alleged

by applicants.

The declaration submitted by the applicant does not show how the exhibits (A – I)

establish diligence. For example, applicant have not shown diligence prior to filing date

i.e. up until August 2, 2002, nor between August 2, 2002 up until October 17, 2002.

Moreover, there is an unaccounted gap between June 13, 2002 and Nov. 13, 2002, due

diligence must be shown.

Therefore the evidence submitted is not sufficient and patent application

publications and certain international application publications having an effective prior

art date prior to the application being examined may be used in a rejection of the claims.

See MPEP § 706.02(a) and § 2136- § 2136.03. Thus, the prior art cited by the

examiner, Osman et al. U. S. Patent Publication 2004/0024894 does overcome the

effective filing date of the applicants' invention.

Priority

2.   This application claims the benefit of provisional application 60,419,710 (October

17, 2002).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3.   Claims 1 – 32 are rejected under 35 U.S.C. 102(e) as being anticipated by

Osman et al U.S. Patent. Publication No. 2004/0024894 (referred to hereafter as

Osman).

As to claim 1, Osman teaches a method of processing data in a stateful protocol

processing system configured to process multiple flows of messages, said method

comprising:

receiving a first plurality of messages of a first of said flows, said first of said flows

comporting with a first stateful protocol (see paragraph 0010 - 0011);

deriving events of at least a first type and a second type from said first plurality of

messages (see paragraph 0010 - 0011, Osman discloses events associated with flows

are derived from received messages);

assigning a first protocol processing core to process said events of said first type

accordance with said first stateful protocol, said first protocol processing core being

selected from among a plurality of protocol processing cores identified in a memory

structure as being compatible with said events of said first type (see paragraphs 0011-

0013 Osman discloses assignment of processing protocol cores to events of flows); and

assigning a second protocol processing core to process said events of said

second type in accordance with said first stateful protocol (see paragraphs 0011- 0013

Osman discloses assignment of multiple processing protocol cores to events of flows).

As to claim 2, Osman teaches the method of claim 1 further including:

receiving a second plurality of messages of a second of said flows, said second of said

flows comporting with a second stateful protocol; and deriving events of at least a third

type and a fourth type from said second plurality of messages (see paragraphs 0011-

0013 Osman discloses assignment of processing protocol cores to events of flows).

As to claim 3, Osman teaches the method of claim 2 further including:

assigning a third protocol processing core to process said events of said third type in accordance with said second stateful protocol (see col.) ; and assigning a fourth protocol processing core to process said events of said fourth type in accordance with said second stateful protocol (see claim 49) .

As to claim 4, Osman teaches the method of claim 2 further including: assigning said first protocol processing core to process said events of said third type in accordance with said second stateful protocol (see claim 49.); and assigning said second protocol processing core to process said events of said fourth type in accordance with said second stateful protocol (se claim 49).

As to claim 5, Osman teaches the method of claim 1 further including: identifying a first plurality of protocol processing cores configured to process said events of said first type (see .); and selecting said first protocol processing core from among said first plurality of protocol processing cores (see paragraph 0032).

As to claim 6, Osman teaches the method of claim 5 further including: identifying a second plurality of protocol processing cores configured to process said events of said second type and selecting said second protocol processing core from among said second plurality of protocol processing cores (see paragraph 0032 and fig.1A.).

As to claim 7, Osman teaches the method of claim 1 further including: extracting a first flow identification key from said first plurality of messages (see paragraph 005); generating a first local flow identification proxy based upon said first

flow identification key; and retrieving a first flow state characterizing said first of said

flows using said first local flow identification proxy(see paragraphs 049 – 0050).

As to claim 8, Osman teaches the method of claim 7 further including:

extracting a second flow identification key from said second plurality of messages (see

paragraph 0119);

generating a second local flow identification proxy based upon said second flow

identification key; and retrieving a second flow state characterizing said second of said

flows using said second local flow identification proxy (see paragraphs 049 – 0050).

As to claim 9, Osman teaches the method of claim 2 further including:

receiving said first plurality of messages over a first logical channel; defining a first

class of events corresponding to at least said events of said first type and said events

of said second type; and executing a first event-handling routine applicable to said first

class of events (see paragraph 0123).

As to claim 10, Osman teaches the method of claim 9 further including:

receiving said second plurality of messages over a second logical channel;

defining a second class of events corresponding to at least said events of said third

type and said events of said fourth type; and executing a second event-handling routine

applicable to said second class of events (see paragraph 0123).

As to claim 11, Osman teaches the method of claim 3 further including:

retrieving a first flow state characterizing said first of said flows ; partitioning said first

flow state into a first workspace portion and a second workspace portion; and

assigning said first workspace portion to said first protocol processing core and said

second workspace portion to said second protocol processing core(see paragraph

0067).

As to claim 12, Osman teaches the method of claim 11 further including:

retrieving a second flow state characterizing said second of said flows; partitioning said

second flow state into a third workspace portion and a fourth workspace portion; and

assigning said third workspace portion to said third. protocol processing core and said

fourth workspace portion to said fourth protocol processing core (see paragraph 0067).

As to claim 13, Osman teaches the method of claim 2 further including:

setting a first flow timer associated with said first of said flows; generating a first

timeout expiration event upon expiration of said first flow timer; and forwarding said

first timeout expiration event to a first selected protocol processing core (see

paragraph 0064).

As to claim 14, Osman teaches the method of claim 13 further including:

setting a second flow timer associated with said second of said flows;

generating a second timeout expiration event upon expiration of said second flow timer;

and forwarding said second timeout expiration event to a second selected protocol

processing core (see paragraph 0064).

As to claim 15, Osman teaches the method of claim 1 further including:

generating an additional event based upon a current state of said first of said flows;

retrieving a current flow state on the basis of said additional event see paragraph

0119); and

assigning a third protocol processing core, different from said first protocol processing

core and second protocol processing core, to continue processing said events of said

first type and said second type (see 0019).

As to claim 16, Osman teaches the method of claim 2 further including:

establishing a first communication buffer associated with said first of said flows, said

first communication buffer being of a first buffer size based upon information within said

first plurality of messages (see paragraph 0037); and establishing a second

communication buffer associated with said second of said flows, said second

communication buffer being of a second buffer size based upon information with said

second plurality of messages (see paragraph 0087).

As to claim 17, Osman teaches the method of claim 16 wherein said first

communication buffer is comprised of a predetermined number of pages of equal size

wherein one of said pages is allocated in connection with each of a plurality of allocation

operations performed during communication of data associated with said first of said

flows (see paragraph 0071).

Claims 18 – 32 do not teach above and beyond the limitations of claims 1 – 17

and therefore are rejected under the same rationale.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1 – 31 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 - 41 of copending Application No. 10,211,434. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1 – 41 of Patent Application Number 10,211,434 contains every element of the claims 1 – 31 of the instant application and thus anticipate the claims of the instant application. Claim(s) as such is/are unpatentable over obvious type double patenting. A later patent/application claim is not patentably distinct from an earlier claim if the later claim is anticipated by earlier claim.

This is a <u>provisional</u> obviousness-type double patenting rejection because the

conflicting claims have not in fact been patented.

Instant application 10/660 055	Pending Application 10/211,434
1. A method of processing data in a stateful protocol processing system configured to process multiple flows of messages, said method comprising:	**1. A method of processing data in a stateful protocol processing system ("SPPS") that processes a multiplicity of flows of messages**, each flow being associated with a uniquely corresponding flow identification ("FID") that is conveyed by messages belonging to such flow, the method comprising:
receiving a first plurality of messages of a first of said flows, said first of said flows comporting with a first stateful protocol;	a) **receiving a plurality of messages belonging to a particular flow;**
deriving events of at least a first type and a second type from said first plurality of messages;	b) **deriving SPPS events associated with the particular flow from the received messages**;
assigning a first protocol processing core to process said events of said first type in accordance with said first stateful protocol; and	c) specifically **assigning a first protocol processing core ("PPC") to process one or more events of the particular flow in accordance with a stateful protocol** (SP) of the particular flow; and
assigning a second protocol processing core to process said events of said second type in accordance with said first stateful protocol	d) specifically **assigning a different second PPC to process one or more other events of the particular flow** in accordance with the SP of the particular flow.

Instant application 10/660 055	Pending Application 10/211,434

18. A stateful protocol processing apparatus configured to process multiple flows of messages, said apparatus comprising :
 	
 an input processing unit disposed to *receive a first plurality of messages of a first of said flows*, said input processing unit **deriving events of at least a first type and a second type from said first plurality of messages**;
 	
    a first protocol processing core;
 	
 a second protocol processing core; and
    a dispatcher operative **to assign said first protocol processing core to process said events of said first type in accordance with a first stateful protocol and to assign said second protocol processing core to process said events of said second type in accordance with said first stateful** protocol.
	18. A method of processing data in a data communication **stateful protocol processing system that processes a multiplicity of flows of data communication messages,** each flow being associated with a uniquely corresponding flow identification ("FID") that is conveyed by messages belonging to such flow, the method comprising:
	
	  a) *receiving messages belonging to a particular flow and messages belonging to other flows*;
	
	  b) **deriving events from the received messages that are associated with the flow indicated by the FID of the message** from which they are derived, including **events associated with the particular flow and events associated with the other flows;**
	
	  c) placing each event in one of a group of one or more preliminary processing queues;
	
	 d) **assigning a first protocol processor core ("PPC") to process a first event of the particular flow** without regard to the preliminary processing queue in which the first event is located, and subsequently transferring the first event to a local queue of the assigned first PPC; and
	
	 e) **assigning a different second PPC to process a different second event of the particular flow** without regard to the preliminary processing queue in which the second event is located, and subsequently transferring the second

	event to a local queue of the assigned second PPC.

Arguments have been addressed above.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 – 32 are rejected under 35 U.S.C. 102(e) as being anticipated by

Lundstrom et al U.S. Patent. No. 7,289,480 (referred to hereafter as Lundstrom).

As to claim 1, Lundstom teaches a method of processing data in a stateful

protocol processing system configured to process multiple flows of messages, said

method comprising:

receiving a first plurality of messages of a first of said flows, said first of said flows

comporting with a first stateful protocol (see col.1 , lines 54 – 66, col. 2, lines 55 – 66,

Multiple flows of TCP/IP);

deriving events of at least a first type and a second type from said first plurality of

messages (see   col.5, lines 1 – 14, col.5 lines 39 – col.6 line 41, controller for

processing flow type data of packets according to the parameter values filtered from the

flow);

assigning a first protocol processing core to process said events of said first type

accordance with said first stateful protocol, said first protocol processing core being

selected from among a plurality of protocol processing cores identified in a memory

structure as being compatible with said events of said first type (see col. 5, line 39 – col.

6, lines 41 flows defined in a flow profile); and

assigning a second protocol processing core to process said events of said

second type in accordance with said first stateful protocol (see col.7, lines 31 – 44 , col.

8 lines 30 – 64 and col.9, lines 63 and 65 and fig.3).

As to claim 18, Lundstrom teaches a stateful protocol processing apparatus

configured to process multiple flows of messages, said apparatus comprising

an input processing unit disposed to receive a first plurality of messages of a first

of said flows, said input processing unit deriving events of at least a first type and a

second type from said first plurality of messages (see col.1, lines 54 – 66, col.2, lines

55 – 66, multiple flows of TCP/IP);

a first protocol processing core, said first protocol processing core being included

among a plurality of protocol processing cores identified in a memory structure as

being compatible with said events of said first type (see col.5, lines 1 – 14, col.5, lines

39 – col.6 line 41, controller processing flow type data);

a second protocol processing core (see col.7, lines 31 – 44 , col.8 lines 30 – 64,

col.9, lines 63 – 65); and

a dispatcher operative to assign said first protocol processing core to process said

events of said first type in accordance with a first stateful protocol and to assign said

second protocol processing core to process said events of said second type in

accordance with said first stateful protocol (see col.5, lines 1 – 14, col.5 line 39 – col.6

line 41, col.7 lines 10 – 23. col. 8 lines 21 – 64, controller for processing flow type

data packets according to parameters values from flow profile).

As to claim 19, Lundstrom teaches the apparatus of claim 18 wherein said input

processing unit further:

receives a second plurality of messages of a second of said flows, said second of

said flows comporting with a second stateful protocol; and derives events of at least

a third type and a fourth type from said second plurality of messages (see col.7, line

31 – 44, col.8, lines 30 – 64).

As to claim 20, Lundstrom teaches the apparatus of claim 19 wherein said

dispatcher further:

assigns a third protocol processing core to process said events of said third type

in accordance with said second stateful protocol; and assigns a fourth protocol

processing core to process said events of said fourth type in accordance with said

second stateful protocol (see col.8, lines 1 – 64 and fig.3) .

As to claim 21 , Lundstrom teaches the apparatus of claim 18 wherein said

dispatcher is further operative to generate a first local flow identification proxy based

upon a first flow identification key extracted from said first plurality of messages(see

col.8, lines 1 – 64 and fig.3).

As to claim 22, Lundstrom teaches the apparatus of claim 21 further including a

lookup controller disposed to cooperate with said dispatcher in retrieving a first flow

state characterizing said first of said flows using said first local flow identification proxy

(see col.5, lines 1 – 14; col.5 line 39 - col. 6, line 41).

As to claim 23, Lundstrom teaches the apparatus of claim 22 further including:

a first on-chip memory associated with said first protocol processing core; and a

second on-chip memory associated with said second protocol processing core wherein

said dispatcher assigns a first workspace portion of said first flow state to said first

protocol processing core and a second workspace portion of said first flow state to said

second protocol processing core, and wherein said lookup controller manages transfer

of said first workspace portion to said first on-chip memory and said transfer of said

second workspace portion to said second on-chip memory (see col.7, lines 31 – 44; col.

8, lines 30 – 64; col.9 lines 63 – 65).

As to claim 24, Lundstrom teaches the apparatus of claim 18 further including a lookup controller configured to administer a first flow timer associated with said first of said flows, said lookup controller sending a first timeout expiration event to a first selected protocol processing core upon expiration of said first flow timer (see col. 1, line 63 – col.2 line 18; col.5 line 16 – col. 6, line 41 flow timer associated with flows defined according to association flow type).

As to claim 25, Lundstrom teaches the apparatus of claim 18 wherein said first protocol processing core generates an additional event based upon a current state of said first of said flows, said apparatus further including a lookup controller disposed to cooperate with said dispatcher in retrieving a current flow state on the basis of said additional event (see col.5,lines 54 – 66; col7, lines 10 – 23; col.8 lines 21 – 64).

As to claim 26 , Lundstrom teaches the apparatus of claim 25 wherein said dispatcher assigns a third protocol processing core, different from said first protocol processing core and second protocol processing core, to continue processing said events of said first type and said second type (see col. 5, lines 1 – 14; col.5 lines 39 – col.6 line 41).

As to claim 27, Lundstrom teaches the apparatus of claim 19 further including a socket memory controller configured to establish a first communication buffer associated with said first of said flows, said first communication buffer being of a first buffer size based upon information within said first plurality of messages (see col. 5, lines 1 – 14; col.5 lines 39 – col.6 line 41).

As to claim 28, Lundstrom teaches the apparatus of claim 27 wherein said socket memory controller is further configured to establish a second communication buffer associated with said second of said flows, said second communication buffer being of a second buffer size based upon information with said second plurality of messages(see col. 5, lines 1 – 14; col.5 lines 39 – col.6 line 41).

Claims 2 – 17 and 29 – 32 do not teach above and beyond the limitations of claims 1, 18 – 28 and therefore are rejected under the same rationale.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sargon Nano whose telephone number is 571 272 4007. The examiner can be normally be reached on Monday – Friday 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sargon N Nano/

Examiner, Art Unit 2457

/ARIO ETIENNE/

Supervisory Patent Examiner, Art Unit 2457